

refraction was then unknown, and where the results were pronounced very poor by a number of American oculists who had observed and practised refraction under cycloplegics both in England and America; it was naturally a great surprise to hear any doubt expressed on what I had learned to consider the only way to do a proper refraction.

Since that time a considerable experience in refraction myself has given me a perspective on the subject that compels me to side definitely and finally with the champions for a cycloplegic in refraction, in the majority of cases. I have found that there is altogether too much guesswork without a cycloplegic, and although at times one may get just as good results by manifest, yet in the greater number of cases the results are absolutely indifferent and wrong. And by results I mean the increased ability of the patient to use the eyes without any discomfort or annoyance.

Are the opticians and the oculists who use no cycloplegic right when they inform their patients that the introduction of "drops" in the eye for the correction of refractive errors is not necessary and sometimes harmful? Or are the oculists who insist in every case, irrespective of age or circumstances, justified in their stand that the only way to refract the eye is to paralyze the muscle of accommodation? In other words, we have on the one hand a number of advocates for refracting the eye "just as it is"; on the other, those who protest that a paralysis of the muscle of accommodation is necessary to obtain the proper degree of error of refraction. In the latter case, then, to be consistent, the muscle must be paralyzed before attempting refraction.

Does homatropin as ordinarily employed completely paralyze the muscle? Is there any one method preferable to another to attain the desired result?

My own observation has been that when properly administered homatropin will paralyze the muscle in at least eighty per cent. of the cases, but that there is a certain per cent. that are not paralyzed and will accommodate to a certain extent after the most careful preparation, and occasionally will exhibit an annoying spasm. In a few cases, too, with small error of refraction, the homatropin seems not to affect the muscle at all. And, which is very important, even after the most complete paralysis, in from twenty to thirty minutes after the last drop has been put in the muscle will again begin to work.

It is therefore essential that the refraction shall take place immediately after the last drop is put in, so that the period of absolute quiescence can be utilized, because if not there will often come on a transient spasm that interferes with the best results. Therefore, if one believes in the use of homatropin then it must be used properly and intelligently to get the result aimed at—complete paralysis of the muscle of accommodation.

The method of using homatropin recommended by Gould, Duane, and others, of a 2% solution is most satisfactory. The solution used should not be too old. One drop in each eye every ten minutes for seven drops, making a period of one

hour. But just as important is the disposition of the patient. The whole philosophy of the procedure is to relax, primarily the muscle of accommodation; secondarily, the patient, for a keyed up patient is difficult to manage.

1. Make the patient as comfortable as possible during the instillation.
2. Have the back of the patient to the light and the eyes facing a blank wall, so that there shall be absolutely no incentive for the muscle to work.
3. After one hour's interval, refract without any delay.

Some use cocaine in addition, one half of one per cent.:

Rx	Homatropin Hydrobromide	grains 10
	Cocaine Hydrochloride	grains 2½
	Aquae	ounce 1

M. Sig.

One drop in each eye every ten minutes for eight drops.

This is a published formula of one of Gould's pupils.

Homatropin is not suitable for young children and in some young adults who have spasms of accommodation. In these cases atropin 1% solution is used for at least two days to get complete paralysis.

No cycloplegic should be put into any eye for the purpose of refraction until the condition of the disc and the tension have been determined. For years it has been my invariable practice immediately after refraction to instil at least five drops of pilocarpine nitrate 1% solution in each eye, and then have the patient put it in hourly for two days. That this is necessary is indicated by the report, about a year ago, of some oculist who recited a number of cases of increased tension and discomfort in young adults after the use of homatropin in refraction. On the general system I have not noticed any untoward effect, though I have used it on people with chronic heart diseases, pregnant women, etc. Rarely, in a neurotic person there may be a slight nausea, without vomiting, but nothing further. We can say, therefore, that in properly selected cases, there is absolutely no danger; and the discomfort from the blurring can be greatly relieved by the use of a myotic after the refraction.

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The garment industry in California has risen to importance in late years, with 75 per cent. of the workers women. With the passage of the minimum wage law, which provides for a period of learning for the workers who wish for advancement, it has been found necessary to open classes in power-machine stitching. These classes are under the supervision of the Federal Board for Vocational Education, and have been instituted in several factories. The women are taught a technical knowledge of the machine and are prepared for the next step in progress. Some of the classes are held at night and are proving satisfactory.—Vocational Summary.

## Book Reviews

**Text-Book of Biology.** By W. M. Smallwood. Third Edition. 306 pages. Illustrated. Philadelphia and New York. 1918.

This book is a good synopsis of some of the

features of biology. It strikes me, however, that its usefulness is more in the way of a review than as a text-book—that is to say, a student knowing only a little of the subject under consideration would frequently be at sea in trying to use this as a text-book, as it presupposes too much knowledge. On the other hand, one who has a fair idea of the subject and who wishes to review it, will find that this book is a considerable aid. It is full of facts—there is much in a small space—the feature of the book that makes it less valuable to the student just beginning, makes it more valuable to the student wishing to review the subject.

A. L. F.

**Whole Truth About Alcohol.** By G. E. Flint. 294 pp. New York: Macmillan Company. 1919.

The whole truth about alcohol  
When this said, it must be all—  
And that is what we get in print  
In a recent book by Mr. Flint.

Strongly condemning its abuse,  
Strongly affirming its proper use,  
He shows that the prohi's have lied  
By "half truths" greatly amplified.

He twists the things they have to say  
About, in just the neatest way;  
So showing when the whole truth's told:  
Their propaganda will not hold.

Although his statements most, are true,  
The work this book was meant to do  
Will never be achieved, I fear,  
'Cause prohibition now is here.

A. L. F.

**Medical Clinics of North America.** Volume 2, Number 4 (January, 1919). Octavo 303 pp. Illustrated. Published bi-monthly. Philadelphia and London: W. B. Saunders Company. 1919. Price per year, \$10.00.

S. W. Bandler: Sterility in women. Walter Timme: New pluriglandular compensatory syndrome. W. W. Palmer: Pneumococcus endocarditis. T. S. Hart: Mitral stenosis and auricular fibrillation. A. R. Lamb: Non-hemolytic streptococcus endocarditis. Leo Buerger: Cystitis. H. R. Geyelin: Certain aspects of modern treatment of diabetes mellitus. J. G. M. Bullock: Local evidence of tonsil involvement in causation of distant or systemic disease. Influenza of head and chest. W. H. Sheldon: Hospital as health unit. A. S. Blumgarten: Primary malignant tumor of lung. Cerebrospinal syphilis. Nephritis. Aortic syphilis. A. McI. Strong: Auricular tachycardia in children. D. W. Atchley: Renal disease. E. F. DuBois: Basal metabolism as a guide in diagnosis and treatment of thyroid disease. Willy Meyer: Advanced pulmonary tuberculosis.

**Medical Clinics of North America.** Volume 2, Number 5 (March 1919). Published bi-monthly. Philadelphia and London: W. B. Saunders Company. 1919. Price per year, \$10.00.

H. A. Christian: Cutaneous pigmentation, jaundice, palpable liver and spleen, and ascites. Fibrinous bronchitis. J. L. Morse: Infantile scurvy. W. P. Graves: Cancer of uterine body as borderline case in gynecology. C. J. White: Some common errors in diagnosis and treatment. F. B. Talbot: Relation of diet to development of children with special reference to the teeth. Channing Frothingham: Aortic aneurysm. G. R. Minot: Banti's disease. Banti's disease mistaken for peptic ulcer. Myelogenous leukemia with low white count. Typical chronic myelogenous leukemia. J. B. Hawes: Tuberculosis and influenza. F. T. Lord: Pulmonary destructive lesion. H. Lilienthal: Relation of clinician to industrial medicine. L. W. Hill: Nephritis in children. F. W. White: Improvement in medical treatment of chronic ulcer of

bibliography is splendid. A study of this work stomach and duodenum. J. P. O'Hare: Chronic nephritis with edema. F. W. Peabody: Some lessons of war in field of cardiac disease. G. C. Shattuck: Chronic pulmonary tuberculosis and arteriosclerosis. War nephritis and chronic adhesive mediastino-pericarditis probable. Syphilis, lesion of aortic arch, probably syphilitic; healed ulcer of stomach or duodenum. A. W. George and R. D. Leonard: Use of X-ray in study of multiple diverticulitis of colon. M. J. Rosenau: Some fallacies in diagnosis of "ptomain poisoning."

**Reconstruction Therapy.** By Wm. R. Dunton. 229 pp. Illustrated. Philadelphia: W. B. Saunders Company. 1919.

This book treats of occupational therapy, of work applied as a curative measure rather than as a means to the economic rehabilitation of the disabled. The author is a psychiatrist and has evidently gained his experience from hospitals for the insane. The results of his observations are laid down in the first nine chapters, which include information of considerable value to those interested. They treat of the duties of the director of occupational therapy, his relation to the nursing staff, the training of nurses and their selection from the occupational viewpoint, and the financial and administrative aspects of occupational therapy. The orthopedic side of reconstruction is superficially dealt with. What there is in the book on curative work, especially as an aid to the physical rehabilitation of stiff and wounded limbs, the rehabilitation of the amputated, and the consideration of prosthetic appliances, seems to have been gotten from the writings of others. The book would be improved if the later chapters were omitted and only those on occupational therapy in psychopathic hospitals retained. There is a useful bibliography at the end of the work.

L. E.

**The Blind.** By Harry Best. 740 pp. N. Y.: Macmillan Co. 1919.

This is the most comprehensive treatise on the condition of the blind in society and the various provisions made for them by society which has yet been published. The condition of the blind in its many different aspects is set forth in careful detail. All measures ever adopted for their welfare are considered—the history of their origin and the practicable aspects of their use, provision for the education of blind children, for the intellectual benefit of the adult, and for their material welfare, are discussed at length. While the work done in our country is fully described, illuminating and through compensation laws are detailed, with

This book is complete, is full of essential information and covers the field from A to Z. The many illustrative cases, comparisons with the work of other countries abound. Full chapters are devoted to systems of pension and indemnification for loss of sight, with the laws governing the provision of these; a great number of decisions in actions against corporations acting as employers, and in corporations other than employer, are cited; principles of insurance as applied to benefits for injuries to the eyes, through private companies by local systems of indemnities will repay any one interested in the blind and their life.

H. B.

## Correspondence

### INJUSTICE TO A STATE SOCIETY MEMBER

In looking through the annual report of the California State Board of Medical Examiners I find on a front page where the certificate of Dr. George Henry Richardson had been revoked on March 20, 1919.

During the last few months I have been pestered repeatedly by collectors concerning the unpaid accounts of a person by this name, also